

FED DOC

D 202.13:45/8

THE NAVAL SAFETY CENTER'S AVIATION MAGAZINE

# approach

August 2000

FEDERAL DOCUMENTS PERIODICAL

Arkansas State Library  
Federal Documents #36-B

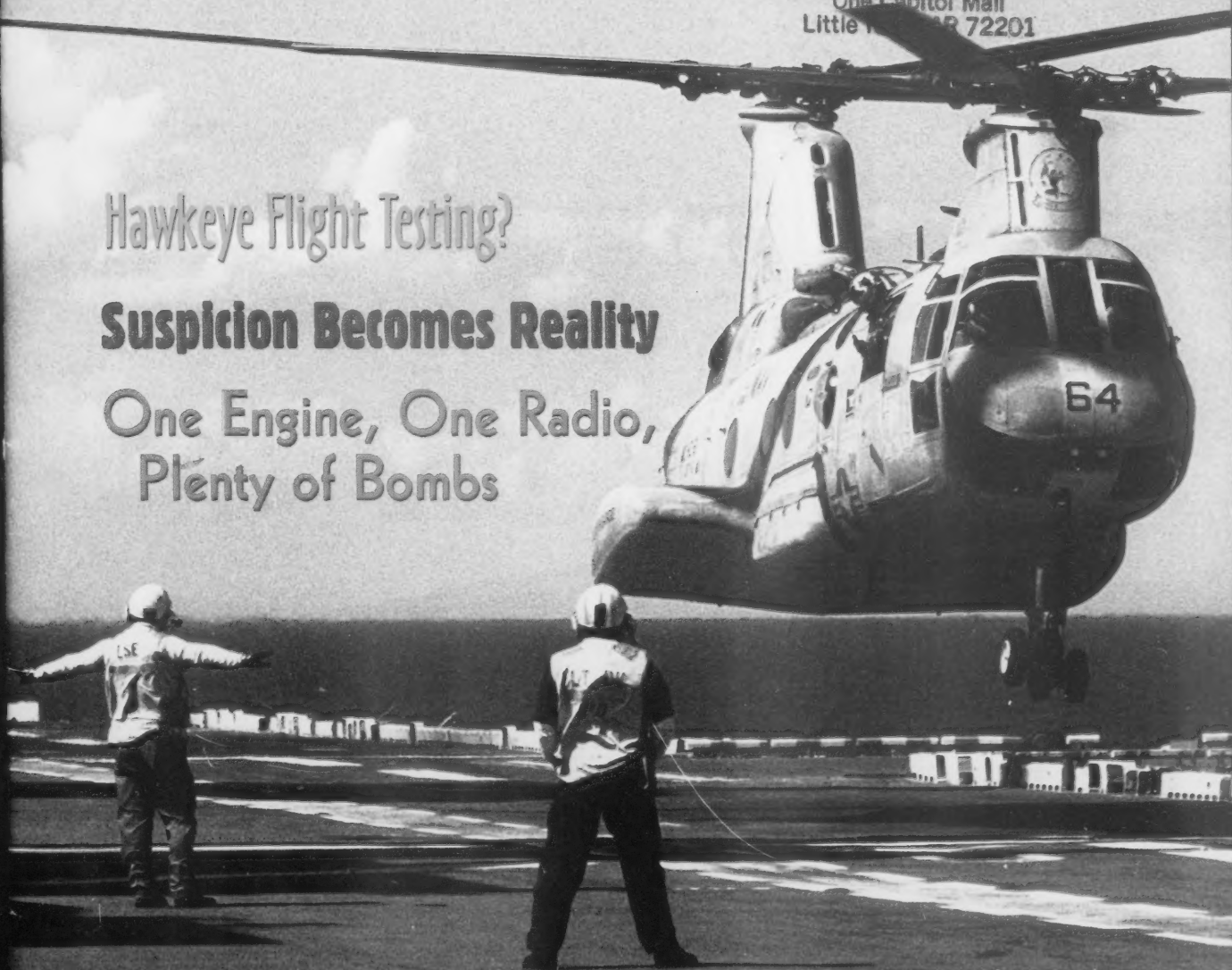
OCT 27 2000

One Capitol Mall  
Little Rock, AR 72201

Hawkeye Flight Testing?

**Suspicion Becomes Reality**

One Engine, One Radio,  
Plenty of Bombs



2001-13

# approach

## The Naval Safety Center's Aviation Magazine

August 2000

Volume 24, No. 8

### On the Cover:

Gulf of Izmit (August 25, 1999) - Flight deck crew members on board USS *Kearsarge* (LHD-5) signal an HH-46 as it returns from picking civilian relief workers to Istanbul, Turkey. U.S. Navy photo by JO1 Robert Benson

**RAdm. Skip Dirren, Jr.**  
**Bill Mooberry**  
**John G. Mahoney**  
**Derek Nelson**  
**Lt. Tom Hamrick**

**Commander, Naval Safety Center**  
**Deputy Commander**  
**Head, Media Department**  
**Editor-in-Chief**  
**Head, Graphics Division**

### Approach Staff

**Derek Nelson**

dnelson@safetycenter.navy.mil

**Yvonne Dawson**

ydawson@safetycenter.navy.mil

**Ginger Rives**

grives@safetycenter.navy.mil

**Letters and**

**Articles**

### Publications FAX

(757) 444-3520 (DSN 564)

**Editor**

Ext. 7244

**Graphics Design and Layout**

Ext. 7252

**Distribution (Magazines and Posters)**

Ext. 7256

**Commander, Naval Safety Center**

**Attn: Approach, Code 712**

375 A St., Norfolk, VA 23511-4399

(757) 444-6791

**Col. Dave Kerrick, USMC**

dkerrick@safetycenter.navy.mil

**Cdr. John Anderson**

janderson@safetycenter.navy.mil

**Cdr. Mike Francis**

mfrancis@safetycenter.navy.mil

**Capt. James Fraser**

jfraser@safetycenter.navy.mil

**Homepage address**

**Aviation Safety Programs**

Ext. 7225

**Aircraft Operations Division**

Ext. 7203

**Aircraft Mishap Investigation Division**

Ext. 7236

**Aeromedical Division**

Ext. 7228

www.safetycenter.navy.mil

Postmaster: Send address changes to *Approach*, Code 74, Naval Safety Center, 375 A Street, Norfolk, VA 23511-4399

*Approach* (ISSN 1094-0405) is published monthly by the Commander, Naval Safety Center, 375 A Street, Norfolk, VA 23511-4399. *Approach* contents should not be considered directive and may not be construed as incriminating under Article 31 of the Uniform Code of Military Justice. Views expressed in guest-written articles are not necessarily those of the Naval Safety Center. *Approach* is available for sale by the Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Subscription price: \$36 per year. Telephone credit card orders can be made 8 a.m. to 4 p.m. Eastern time at (202) 512-1800. Periodicals postage paid at Norfolk, VA and additional mailing offices.

pg. 22

pg. 14

## features

### 2 Convertible Mentor

LCdr. Sean Clark

A night divert to a foreign airfield poses problems for this Hornet driver.

### 4 Really Hot Brakes

Lt. Robert Loughran

Landing heavy and flaps up is no way to go through life, son.

### 6 My Foot Slip Can Take Your Foot Off

Lt. Hunter Ware

A Prowler pilot's foot slips off the brake, nearly breaking bones or worse.

### 8 One Engine, One Radio, Plenty of Bombs

Lt. Sean Rando

Fully loaded with the implements of war, a Tomcat has to divert and fly several hundred miles single-engine. Missing the arresting gear was an added thrill.

### 10 Hawkeye Flight Testing?

LCdr. Jay Elliot

Just in case you ever have to land an E-2C with control of only one aileron, and with the other one stuck full-training-edge up.



pg. 28

pg. 2

**12 Semper Paratus**

*Ltjg. Timothy Kinsella*

Running through hoist-failure scenarios pays off for this H-46 crew.

**14 Creatures of Habit**

*Lt. Loren Romeus*

The old interrupted-preflight bugaboo haunts these aviators, and dramatically interrupts their flight.

**16 Is This How They Do It in the Fleet?**

*Lt. Ralph Smith*

Damn the fog banks, full speed ahead — we've got to get this helo back to the squadron.

**18 Dual-Piloted Partial-Panel**

*Ltjg. Paul Desaulniers*

You'll always have at least one good set of instruments, right? No. And when you find that out, it will probably be under a low ceiling, on a very dark night.

**20 Suspicion Becomes Reality**

*Lt. Ben Hewlett*

S-3 swallows an APU exhaust, diverts, and hook-skips the short-field arresting gear. Then things get colorful.

**22 Silent Night**

*Lt. Chris Petrock*

Hornet goes NORDO just after a night launch.

**24 My Day on the Deck**

*Lt. Andy Collier*

They can't possibly be that dumb. Can they? Yes, they can.

**26 Roll Out the Barrel, We'll Have a Barrel of...Yikes!**

*Lt. Mark Lucas*

Botching a barrel roll and bottoming out at 1,800 feet. It does get better than this.

**28 OK, That's Enough ACM...**

*Lt. Chris Baumstark*

A Tomcat departs three times below 5,000 feet.

**31 Getting into the Zone**

*Ltjg. Dwight Clemons*

VAQ-136 bans paperwork during the final 30 minutes before a flight so the aircrew can concentrate.

## departments

**32 On the Cat**

**IBC Air Wing Milestones**



# Convertible Mentor

by LCdr. Sean Clark

We took off out of NAF El Centro on a beautiful day. The first order of business was a takeoff roll at less than 700 feet. "What were the winds again?" I wondered. "Oh well, as long as they're straight down the runway, who cares?" Just another great day to be flying VFR in our high-performance T-34.

My copilot and I had briefed with the strike lead that we were going to low-safe while we were in the Chocolate Mountains. We mounted up for the 20-minute flight to the restricted area.

We climbed to our VFR cruising altitude of 7,500 feet and contacted Yuma Range to check into the target area. Everything about this flight reminded me of the hundreds of similar flights I'd flown during the past three years... until we started to enter the Blue Mountain Airfield area.

We cruised comfortably into the area, started to cross the Chocolate Mountain ridge line, and promptly ran into a little turbulence. I'm talking the normal turbulence that we

I looked in my rearview mirror to see my copilot pulling his head back into the cockpit. His inertial reel had failed, and his head had burst through the canopy.

feel almost every day out here in the West flying our T-34s, but that's where the similarities stopped. Reaching the downwind side of the ridge, the aircraft felt like it was falling out of the sky.

"This can't be happening to the Mentor," I thought. "It's too high-performance for that!" My next thought was that the wind blast was odd. Then I wondered what this plexiglas was doing in my lap.

No sooner was the aircraft flying again than I looked in my rearview mirror to see my copilot pulling his head back into the cockpit. His inertial reel had failed, and his head had burst through the canopy. I asked the obvious questions: "Are you OK? Did you get cut? Can you still move your head?" I began to slow down the aircraft to minimize the wind blast; 120 knots seemed to work well. I figured we'd better turn around and go back to El Centro.

The flight back seemed to take an eternity, no doubt due to the 40 to 50 knots of wind now in our faces, combined with the 120 knots we maintained to keep down the wind blast. Let's see, that would be a total of 70 knots ground speed. Kind of like driving down the freeway with your convertible top down.





The approach and landing back into NAF El Centro were uneventful, albeit extremely slow. Our ground speed on approach was a whopping 65 knots! Once comfortably back in the ready room, I began to research mountain flying and light aircraft. As a jet aviator, I hadn't thought much about the effects of wind. But as a light-prop aviator, I realized that I'd better start thinking again. I hit the books and went to work. Interestingly, the Federal Aviation Administration has dedicated a whole section to mountain flying in the FAR/AIM.

Here are some of the highlights and recommendations:

- Don't fly a light aircraft near mountains when the winds at your proposed altitude exceed 35 miles per hour.
- Expect winds to be of much greater velocity over mountain passes than reported a few miles from them.
- Approach mountain passes as high as possible.
- Don't fly near or above abrupt changes in terrain. Expect severe turbulence, especially in high winds.

The FAA also suggests that when you approach a mountain ridge, you should fly a 45-degree angle to the horizontal direction of the ridge. You'll find it easier to retreat from the ridge with less stress on the aircraft if you run into severe turbulence and downdrafts. If you encounter severe turbulence, reduce power and adjust pitch until your aircraft approaches maneuvering speed, then adjust power and fly away from the turbulence.

We learned a lot of things the day we created the convertible Mentor. The main thing was to respect your environment. Something as simple as wind can wreak havoc on your otherwise beautiful day. Had we been just a little closer to the ground, we could have crashed.

LCdr. Clark was attached to VMFA-101 as an instructor when this incident took place. He flies with VFA-201 as a reservist.

# Convertible Mentor

by LCdr. Sean Clark

We took off out of NAF El Centro on a beautiful day. The first order of business was a takeoff roll at less than 700 feet. "What were the winds again?" I wondered. "Oh well, as long as they're straight down the runway, who cares?" Just another great day to be flying VFR in our high-performance T-34.

My copilot and I had briefed with the strike lead that we were going to low-safe while we were in the Chocolate Mountains. We mounted up for the 20-minute flight to the restricted area.

We climbed to our VFR cruising altitude of 7,500 feet and contacted Yuma Range to check into the target area. Everything about this flight reminded me of the hundreds of similar flights I'd flown during the past three years... until we started to enter the Blue Mountain Airfield area.

We cruised comfortably into the area, started to cross the Chocolate Mountain ridge line, and promptly ran into a little turbulence. I'm talking the normal turbulence that we

I looked in my rearview mirror to see my copilot pulling his head back into the cockpit. His inertial reel had failed, and his head had burst through the canopy.

---

feel almost every day out here in the West flying our T-34s, but that's where the similarities stopped. Reaching the downwind side of the ridge, the aircraft felt like it was falling out of the sky.

"This can't be happening to the Mentor," I thought. "It's too high-performance for that!" My next thought was that the wind blast was odd. Then I wondered what this plexiglas was doing in my lap.

No sooner was the aircraft flying again than I looked in my rearview mirror to see my copilot pulling his head back into the cockpit. His inertial reel had failed, and his head had burst through the canopy. I asked the obvious questions: "Are you OK? Did you get cut? Can you still move your head?" I began to slow down the aircraft to minimize the wind blast; 120 knots seemed to work well. I figured we'd better turn around and go back to El Centro.

The flight back seemed to take an eternity, no doubt due to the 40 to 50 knots of wind now in our faces, combined with the 120 knots we maintained to keep down the wind blast. Let's see, that would be a total of 70 knots ground speed. Kind of like driving down the freeway with your convertible top down.




photo composition by Suzanne Dawson

The approach and landing back into NAF El Centro were uneventful, albeit extremely slow. Our ground speed on approach was a whopping 65 knots! Once comfortably back in the ready room, I began to research mountain flying and light aircraft. As a jet aviator, I hadn't thought much about the effects of wind. But as a light-prop aviator, I realized that I'd better start thinking again. I hit the books and went to work. Interestingly, the Federal Aviation Administration has dedicated a whole section to mountain flying in the FAR/AIM.

Here are some of the highlights and recommendations:

- Don't fly a light aircraft near mountains when the winds at your proposed altitude exceed 35 miles per hour.
- Expect winds to be of much greater velocity over mountain passes than reported a few miles from them.
- Approach mountain passes as high as possible.
- Don't fly near or above abrupt changes in terrain. Expect severe turbulence, especially in high winds.

The FAA also suggests that when you approach a mountain ridge, you should fly a 45-degree angle to the horizontal direction of the ridge. You'll find it easier to retreat from the ridge with less stress on the aircraft if you run into severe turbulence and downdrafts. If you encounter severe turbulence, reduce power and adjust pitch until your aircraft approaches maneuvering speed, then adjust power and fly away from the turbulence.

We learned a lot of things the day we created the convertible Mentor. The main thing was to respect your environment. Something as simple as wind can wreak havoc on your otherwise beautiful day. Had we been just a little closer to the ground, we could have crashed. 

LCdr. Clark was attached to VMFA-101 as an instructor when this incident took place. He flies with VFA-201 as a reservist.



# Really Hot Brakes

by Lt. Robert Loughran

Watching the crash crew extinguish brake fires on both of my main landing gear, I realized how close I'd come to a major mishap. I'd let a minor problem develop into a situation I could have and should have handled better. As it turned out, basic lessons I thought I'd learned in flight school would have prevented the whole thing.

I had been on a check flight with a senior JO from the squadron as my wingman and instructor. I'd spent the previous day and most of the morning preparing for the hop. We took off with a 10-second interval and made our rendezvous as briefed. We climbed out on the

hazy but otherwise cloudless day, and proceeded to airspace off the coast of North Carolina. I noticed a BIT advisory and checked my displays to determine the cause. I had an FCS degrade, and the FCS page showed a maintenance code of 73. Not knowing what that code meant, I asked my wingman about the degrade. He wasn't sure but recommended I head back to the field for a precautionary, visual straight-in. He proceeded with the mission, and I contacted approach for vectors back to the field. I also called base to let them know the situation and find out what that maintenance code was.

I was level at FL 190 before deciding to turn back, so approach told me to descend to 5,000 feet because I was only 25 miles south



composition by John W. Williams


of the field. I started dumping gas but decided I would not have enough time to reach my maximum normal landing weight of 33,000 pounds. Instead, I adjusted to below the maximum, flared-landing weight of 39,000 pounds. I stopped dumping when the aircraft gross weight was 35,000 pounds. I continued my descent to 1,500 feet and set up for a left base to the runway. I started my turn to final at 4.5 miles and lowered the gear.

Base called back with the cause for the maintenance code. The nosewheel proximity switch had failed. I immediately checked my landing gear for a three-down-and-locked indication. I was sure the gear worked, but with a failed proximity switch, you often don't have accurate indications. The indicators were all green, so I reported three down to tower and got clearance to land on the runway, which was 8,000 feet. As I started to flare for landing, I realized I was extremely fast but figured it was because I was heavier than normal and not on-speed. I floated down the runway farther than expected and noticed I was at 168 knots—much faster than I should have been. On touchdown, I immediately applied the brakes and fed in a little back stick to raise the stabilizers and increase the drag. My squadron's SOP requires 100 knots maximum by the 4-board, with normal braking. I tried to be smooth on the brakes, because I didn't want to overheat them. I slowed to 100 knots with 4,000 feet remaining, but just barely and certainly not with normal braking. I was able to slow to safe taxi speed, clear the runway, and complete my post-landing checks. When I tried to raise my flaps, the switch was already in the up position! I had just landed with the flaps up. That, combined with the heavier landing weight, explained the high approach and landing speed.

During the taxi back to the line, the jet handled normally until I turned off one taxiway onto another and noticed the brakes getting extremely soft and unresponsive. I smelled burning rubber and realized I had hot brakes and possibly a blown tire. I pulled off the taxiway onto the transient ramp and stopped. I secured the engines and climbed out as the

smell of burnt rubber got stronger. The extremely hot brakes had caused both main landing-gear tires to deflate, and as the crash crew rolled up, the port brake was smoking. It caught fire, and as the crash crew extinguished it, the starboard brake caught fire, too. The result: two destroyed brake assemblies, two destroyed tires, one destroyed hydraulic line, and one pilot with some explaining to do.

How many times during flight training were the basics of piloting drilled into our heads? Aviate-navigate-communicate was the mantra preached by every instructor I ever had, especially when training for simulated emergencies. Nevertheless, I'd allowed an unnecessary radio call to break my habit pattern of putting the gear handle down and immediately placing the flap switch to full down. That would not have been such a big deal if I had only followed some of the other training I had received repeatedly, like completing the landing checklist and making an on-speed crosscheck. Even though I was not intending to fly an on-speed approach, the 190 knots of airspeed as I started to flare should have been a big clue. On-speed for my gross weight of 34,500 pounds is 144 knots. When I touched down at 168 knots and finally recognized that something wasn't right, I should have taken it around.

The most dangerous part of this landing was that if I had decided to take it around at any point after I had started braking, it would have been extremely difficult to get airborne. With the flaps up, my takeoff speed would have been significantly higher than normal and the available runway much reduced. I had considered dropping the hook as I struggled to make my board speed, but decided against it as the jet began responding to braking, and the board speed seemed attainable. The key wording in the SOP about board speeds was that you should make them using normal braking. I violated SOP and ended up significantly damaging the jet. Even after making multiple mistakes, I simply could have dropped the hook and trapped at the long-field gear, a much less costly solution. 

Lt. Loughran flies with VFA-83.

by Lt. Hunter Ware

**O**n my second set of work-ups in preparation for my second cruise, we had been bouncing for a week or so. As a pilot, FCLPs seem like running a marathon in the desert: tiring, repetitious, even a little boring. The main challenge seems to simply make it to the end in one piece. As a landing signal officer, it's the same as above, only barefoot on cactus the whole way. I was exhausted, which was the first link in the chain of events that followed. And the routine had begun to flirt with the monotonous. Maybe that was the second link, but I wasn't counting.

I raced to the outlying field used for FCLPs, waved a day period, hurried back to our home field for a day bounce flight of my own, grabbed a fast-food burger, then waved again. It was now zero-dark thirty. I had to hot-switch and hot-pit into a jet for my last night-bounce period. I'd done this a hundred times (OK, maybe only 50). I taxied into the

hot-brake/hot-switch area, and the brakes felt good. I set the parking brake, shut down the starboard engine, and thought of another addition to our next foc'sle follies skit. I was really compartmentalizing now.

The plane captain gave me the pull-chocks signal, and my muscle memory took over. In almost one motion, I stepped on the brakes and pushed in the parking brake. In that split-second, my right foot slipped from the toe brake and kicked in full right rudder. Quickly, I reset the parking brake and put my foot back in place. It seemed like a close one,

# My Foot S Take Your





but I didn't think the aircraft moved, because I came off one brake for only a microsecond.

I got my gas, started motors, taxied, took off, bounced a zillion times, landed, and then walked back to maintenance control. The maintenance chief on duty immediately said, "Sir, we got an Anymouse report—you almost took off a guy's foot."


I replied, "Chief, that's right, and it was totally my fault. I wasn't concentrating, and my foot slipped. I need to apologize to that Sailor."

My chief said, "No problem, sir. It was a great learning point for the line shack. We

won't remove chocks from the front of the tire, we'll kick 'em out from behind and pull them out from the side. Just in case."

"Wow, chief, that's one squared-away line division."

"Very funny, sir. You wouldn't be saying that because you're our division officer now, would you?"

Just because I had been through hot-refueling 50 times didn't make it any less hazardous. Dangerous activities (such as carrier aviation) don't change just because we gain experience—we simply learn to manage the hazards and risks better. In this case, a moment's inattention on my part almost maimed or killed a squadronmate. This lesson reminded me how much I need to pay attention to detail at all times, and also how much the troops operating around our aircraft depend on me to do just that. 

Lt. Ware flies with VAQ-131

# t Slip Can ar Foot Off

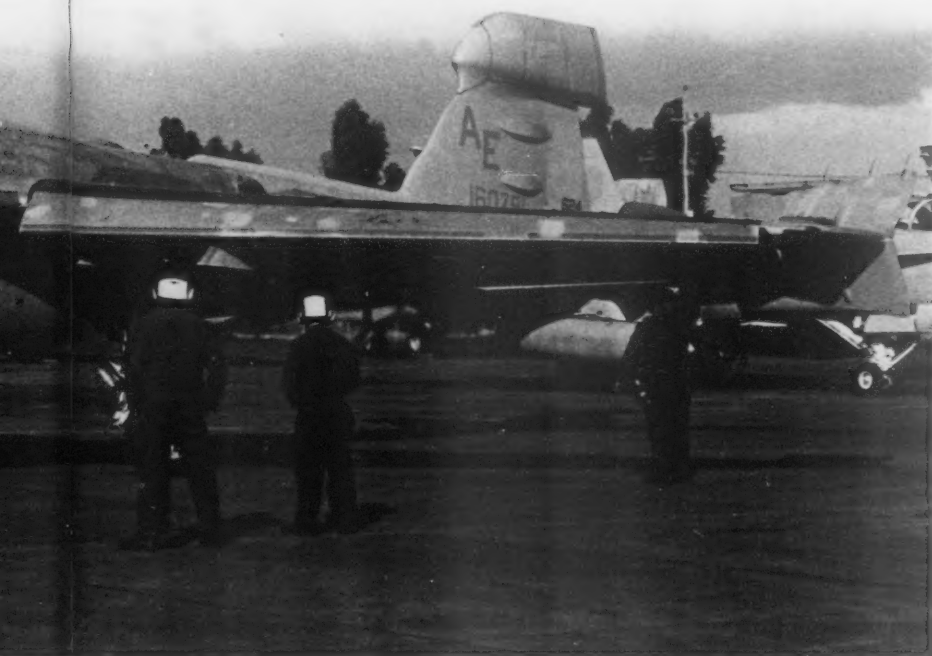


Photo by PH3 Tom Gibbins

# One Engine, One Radio



## Plenty of Bombs

by Lt. Sean Rando

**W**e were three weeks into the Kosovo campaign when my pilot and I got our first port call, compliments of an oil-breather-pressure light in our Tomcat, followed by a single-engine divert to Sigonella. As a FAC(A) aircrew, we had originally intended to teach a few lessons to the Serbian forces in Kosovo with our four GBU-12s (500-pound laser-guided bombs) and whatever other ord-

nance our fragged CAS assets would bring to the party. Instead, we learned a few lessons of our own that night.

We had reported on station 10 miles west of the Albanian-Kosovo border at around 2200. After getting the current situation update, which included medium AAA and SA-6 sites that hadn't been located, we proceeded east into Kosovo at FL240 in search of pre-

io,

nbs

briefed artillery emplacements that needed servicing. Five minutes into bad-guy country, my pilot told me we had an oil-breather-pressure light on the right engine. He brought the engine back to idle and evaluated oil pressure according to NATOPS. The light stayed steady and oil pressure was normal. NATOPS says if oil pressure is normal, then assume it is a breather-pressure problem and shut down the affected engine.

Because these pressure switches are notorious for their false indications, it took about half a second to decide that we would leave the engine running, at least until we could get the nose pointed in a better direction, namely back the way we came. We told our wingman what was happening. Then we turned around and secured the right engine.

We were loaded with four GBU-12s, a pair of AIM-9 Sidewinders, an AIM-7 Sparrow, a LANTIRN pod, and about 16,000 pounds of gas. We couldn't maintain FL240 at mil power, so my pilot went to full afterburner on the left engine until we crossed the border. Then we started a gradual descent to 17,000 feet; at mil power, the left engine couldn't keep us any

higher than that.

Since we were 200 nm from the ship, we had plenty of time to complete the single-engine cruise checklist and weigh our options. Gas and weather were no problem, so we could divert if we had to. We'd have to jettison our stores if we were to shoot a night, single-engine approach to the ship. Since the air wing was racing through GBU kits, we were told to keep our ordnance and divert to Sigonella. Beautiful, another 200


miles single-engine. I looked for the approach plate, then consulted my handy Garmin GPS.

I gave the field information to my pilot, just like back in the training command. I pulled up the frequencies for approach, tower, and ground, which were all VHF on the Garmin. Our wingman decided to hang on for most of the transit, since he had plenty of gas, too. It's a good thing he did, because soon after establishing comms with Sigonella approach, our back radio died. The front radio is not VHF capable, so we had to ask our wingman for help. They quickly coordinated a UHF frequency for us.

While struggling to understand the Italian controllers, we completed the single-engine landing checklist and confirmed one more time that the short-field arresting gear was in battery. Our wingman returned to the ship when it was clear we would make it to the field. After touchdown, however, we didn't feel the mild tug of the field arresting gear. Instead, the radio filled with "Alpha Juliet Two-Oh-Two, you have fire coming from your back!" After a second or two of checking for other indications inside and outside the cockpit, we realized he was talking about the sparks the hook was making as it dragged down the runway.

My pilot slowed the jet and taxied off the runway, where we spent a half-hour waiting for the ground crew to de-arm us. I had to get out of the jet and pin the gear myself before shutdown because the ground crew there had never pinned a Tomcat before.

Thinking back on that night, I'm glad we had a wingman to help us wade through some of the admin comm while completing checklists. More importantly, they saved us from having to reestablish comms with Sigonella approach control through UHF guard, which would have been difficult at best. I also kicked myself for not having the proper pubs—such as an approach plate—handy. The Garmin GPS helped us with VHF frequencies and field layout, but UHF frequencies would have been nice to have that night, and if it weren't for the nice weather, we might have had to shoot an instrument approach.

Know your diverts cold, and always carry the pubs for those diverts and the local area on every flight. Finally, think twice about sending your wingman home, even when you're sure you have the situation suitcased. 

Lt. Rando flies with VF-14.



by LCdr. Jay Elliott

**T**he skies were crystal clear over NAS Pt. Mugu, and I was looking forward to flying. I did not suspect that the flight would bring an opportunity for another Hawkeye milestone.

We were scheduled for post-maintenance functional check flight (FCF) bravo and charlie profiles. The mechs had worked on the aircraft's propeller and flight-control system: they had changed the port prop assembly, port aileron bungee, autopilot actuator, and drag brace. Prior to our flight, the aircraft underwent several turns, including high-power engine runs, with no problems. QA thoroughly briefed us on the maintenance, then we manned up the aircraft. I didn't have my FCF qual yet in the squadron. As a result, although I would be in the left seat, I wasn't the aircraft commander. The flight was supposed to be the last of my FCF syllabus hops prior to my signoff.

Everything was fine through the takeoff roll, and all the FCF checks were proceeding smoothly. However, just after we retracted the landing gear, at approximately 15 feet AGL, the aircraft began an uncommanded, rapid, left-wing-down roll. I countered the roll; I needed approximately three-quarters right lateral throw just to maintain wings level. Using ICS, I called, "We have a problem," and other than being sure that it was not engine-related, which a quick scan of the tape gauge provided, I didn't know what the source was. The CAPC and I quickly discussed that we would keep the airspeed at its current 155 KIAS and not bring the flaps up from the 10-degree takeoff setting. In the E-2, the ailerons droop with the flaps, and we did not want to test the effect of a flap change on the roll input. The copilot told tower we needed to return for landing. Although I requested he declare an emergency, the call never made it out of the aircraft. With the roll input countered, I began a climbing left turn to 2,000 foot downwind.

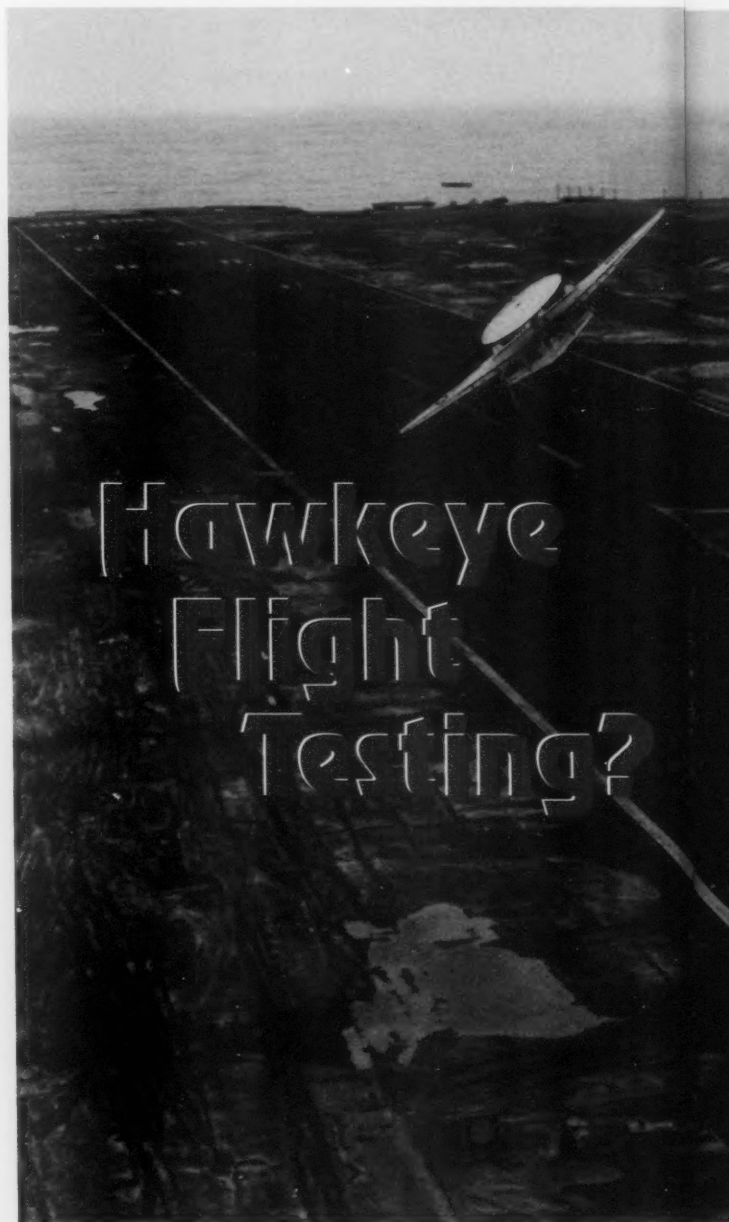
At the beginning of the turn, I reduced the port engine's power toward idle to help the turn rate and reduce the required aileron input. Because I didn't tell the copilot I was going to do that, it confused him. He thought we'd lost an engine.

On downwind, we completed the NATOPS flight-control-malfunction procedures, with the

---

Although I requested he  
declare an emergency,  
the call never made it  
out of the aircraft.

---



CICO backing us up from the pocket checklist. We discussed potential sources. A flap asymmetry is possible in the E-2, but we hadn't moved the flaps, and they looked like they matched. The port aileron was an obvious candidate, because of the maintenance, but the failure mode was not clear. The PCL procedures didn't work, and the aircraft still wanted to roll left. It was possible to maintain wings-level trim by using full, right-wing-down, aileron trim.

We examined controllability in a gear-down, 10-degree flap configuration. As we were turning to a


long final for the runway, we got an unexpected flyby from a Tomcat coming into the field via course rules. It wasn't a near-midair, but they had to maneuver, and it could have been avoided if we had declared an emergency with tower. We continued our approach and made a straight-in landing, maintaining 150 KIAS until touchdown. A long straight-in was critical because we wanted to detect any drift early and avoid having to make large lineup corrections. Our touchdown speed was higher than the published NATOPS limit of 135 knots. However, the copilot and I were aware of a recent NATOPS conference that increased this speed to 174 knots.

Post-flight inspection revealed that the follow-up push rod in the port aileron had failed. This failure caused the loss of feedback for aileron position, which put the aileron in a full-trailing-edge-up position. The original, port-aileron, drag-brace change had been required because, due to improper maintenance procedures, it had been bent during aileron rigging.

An EI response on the failed push rod said it normally has loads of about 2.5 pounds, and its failure load is approximately 1,550 pounds, a safety factor of 620. The most likely conclusion was that the push rod had been damaged at the same time as the drag brace. Maintenance personnel did not detect it from visual inspection and it didn't show up on subsequent throw-checks and engine turns before the flight.

This incident generated some important points. We proved you could fly the Hummer with only one aileron. Also, we changed airspeed very little while in this condition. From gear retraction to touchdown, our airspeed only varied by 10 knots. We checked controllability only in an airspeed range sufficient for landing.

If your aircraft is under control, don't change configuration unless absolutely necessary to make the landing. Had we changed flap settings, the aileron droop may have made the aircraft so hard to handle that it might have become uncontrollable.

Declare an emergency. This action will clear the space around you and reduce your cockpit workload by minimizing external factors while you handle your aircraft. 

LCdr. Elliott, a former test pilot, flies with VAW-112.



photo modified by Yvonne Dawson

PH2(AW) Brian McFadden



# Semper Paratus

by Ltjg. Timothy Kinsella

**M**y first deployment as an H2P had been successful. I was part of the SAR detachment on board the USS *Peleliu* (LHA 5), and by the end of the cruise had become quite comfortable with my flying abilities in the H-46D. I was looking forward to making HAC and—after 80 straight days at



sea—looking forward to seeing home even more. We stopped in Hawaii to pick up Tigers while en route to San Diego, planning several flight demonstrations and familiarization tours to keep them busy on the trip home. Throughout cruise, our detachment had worked successfully with the EOD personnel. We were going to do a final cast and recovery with them, which involved some demolition charges for the Tiger demonstration.

Prior to our aircrew brief, we briefed as usual with the EOD to establish our course of action in the event of an emergency. After launching from *Peleliu*, we were cleared to the starboard delta to await our commence time. The plan was to place a buoy in the ocean on the port side, 1,000 yards ahead of the ship, so the demo would go off as the ship passed. While waiting for all this to happen, the crew chief decided to give some impromptu training to the second crewman. Keeping our mission in mind, he ran through several hoist-failure scenarios. His forethought would prove invaluable.


Eventually the time came for us to set up the buoy and prepare the demo charges. *Peleliu's* flight deck was crowded with Tigers looking forward to seeing the explosion. After some confusion with Center on where exactly to place the buoy, we flew a 10-knot, 10-foot approach and jumped two EOD personnel with the buoy and charges. The waves were 4 to 6 feet high, but the divers appeared to be doing well. Upon getting the "OK" signal, we perched about 100 yards to the left and climbed up to 150 feet to avoid the salt spray and give the divers some room to work. After about five minutes, we received the pick-up signal, maneuvered over the divers, and descended to 30 feet for the pick-up. The crew chief was operating the hoist. Just after the hook reached the water, he reported a hoist failure and leak. The HAC and I looked at our gauges and saw our utility system and No. 2 flight-boost system had gone to zero.

The pilot at the controls (the HAC) immediately began transitioning to forward

flight, not realizing there was a diver on the hook. The crew chief was having a hard time cutting the cable; the switch was covered in hydraulic oil, so it was hard to break the shear-wire on the switch cover. He told the pilot that we had a diver on the hook, the HAC stabilized the helicopter, and the crew chief told us the cable had been cut. We transitioned to forward flight, gained altitude, and bustered to the ship, which was about four miles away.

While all this was happening, I ran through the emergency procedures, declared an emergency, and informed Tower the SAR aircraft needed to pick up the EOD divers. The second crewman ensured the passengers were strapped in, then broke out the pocket checklist and completed the emergency procedures once again.

The ship cleared the deck in record time, and we brought the helo in for a landing on spot 7. We immediately shut down the aircraft, deciding not to use the rotor brake for fear of starting a fire with so much hydraulic fluid leaking. Not only had a supply line broken on the hoist, but a fitting had backed off the pressure line from the pump. Consequently, 3,000-psi hydraulic fluid was streaming out all over the back of the aircraft. The crew chief was drenched from head to toe with fluid from the winch.

Even though we had discussed this emergency and practiced it half an hour before, the suddenness of it shocked us all. Although the time between losing the hoist and landing was only about six minutes, it seemed more like six hours. I learned a valuable lesson: you can never be too prepared. A simple operation very quickly turned into a potentially fatal one, as is so often the case with aircraft emergencies. Excellent crew coordination, a prompt response to the emergency, and quick thinking helped us land safely. No matter how comfortable you are with the mission, always be prepared. 

Ltjg. Kinsella flies with HC-11

# Creature of Habit



by Lt. Loren Roméus

**W**e had just taken off from Monroe, La., for an easy flight back to Whiting Field. It was one of my last flights in the VTs, and I was beginning to feel at home in the front seat of the T-34C. The air was smooth, and there wasn't a cloud in sight as we purred upward into the clear blue sky. "This is the life!" I thought as the altimeter wound through 3,000 feet, and I prepared to level off at 3,500.

Wham! Bang! Crunch! In the blink of an eye, the perfect view out my front windscreen was marred by the twisted metal of a crumpled engine cowling. For a moment, I pondered the trajectory the cowling would follow if it detached from the airframe. I knew the windscreen, my helmet and visor were my only lines of defense.

While I wasted precious seconds worrying about the cowling, the instructor in the back



seat showed a little more sense. Taking the controls and slowing us down, he asked, "What happened?"

Although I wasn't sure, I carefully described what I saw. To my amazement, the crumpled cowling was holding perfectly steady in the turbulent air right behind the propeller. We might have hit a bird, but there weren't many birds at 3,000 feet, and it was

unlikely a bird could have passed through the propeller.

Rather than speculate about the cause of our precarious situation, we focused on returning to terra firma. After a few controllability checks at altitude, we landed at Monroe Regional Airport. We inspected the engine cowlings and prop area, but we saw no signs of an external strike. It looked as if the cowlings had simply popped open in flight and crumpled in the slipstream.

Why did the cowlings open in flight? Was it a faulty latch? Had we failed to secure it




during preflight? As disturbing as the latter thought was, we couldn't dismiss the possibility. After giving our battle-scarred chariot another careful inspection, we sat down and played the preflight sequence of events step-by-step.

We had begun in routine fashion, starting at the trailing edge of the port wing and heading in opposite directions around the aircraft. I was examining the port side of the

engine, and the instructor was rounding the tail when we were interrupted by an airline pilot who came sauntering over to admire our little puddle-jumper. He introduced himself as a former naval aviator who had flown the T-34B during his days as a student. We stood around shooting the breeze for 10 minutes or so before he wandered off, still reminiscing about the "good old days" when he had been in my shoes. My instructor, noting the delay, told me to go ahead and strap in while he finished the preflight. That's when things got a little hazy. Because I was in the cockpit strapping in and going through the checklist, I wasn't watching the instructor button up the aircraft. It wasn't his normal routine, so the instructor could not remember where he had resumed the preflight and whether he had secured all the cowlings.

That little incident earned me another day in the bayou country; more importantly, it taught me the value of following a routine. Checklists are an indispensable part of aviation, and so are other repetitive tasks for which you develop routines. Since that day, I have made a concerted effort to make sure my routines balance thoroughness and efficiency. Some routines, like preflight, change whenever I transition to a new airframe. Others, like setting up for an instrument approach, require little change. When I deviate from my routine, warning bells go off, and I increase my attention to detail to keep from missing something important.

*Pilots are creatures of habit – make sure your habits are good ones.* 

Lt. Roméus flies with HC-4

photos by PH2 Matthew Thomas





We were flying our FRS SH-60B back from Portland, Ore., to NAS North Island after a terrific weekend at an air show. The level of experience varied widely throughout the crew. I was the least experienced, a CAT I jaygee with only a few dozen hours in type. The other student was a CAT 1A lieutenant commander with tons of hours in H-2s, making his transition to the SH-60B. Our instructor was a cruise-experienced lieutenant with close to 1,000 hours in type. The aircrewman was a salty AW1 (is there any other kind?) with more hours in helos than I had in the Navy.

It was a fine, CAVU Sunday as we launched out of Portland. The leg down to Klamath Falls was notable only for the spectacular scenery. On landing, we had the AW1 take care of servicing the helo while the three officers went in to get weather and file. I was going to be flying this leg and was looking forward to a few hours of stick time. I got the weather while the instructor filed our next leg to Fresno for me. We manned up and launched.

When we got about 30 minutes out of Fresno, I flipped through the *IFR Supplement*, looking for the Fresno ANG base frequency. I discovered they didn't operate on Sundays. I asked the instructor if he was aware of this, and he shrugged his shoulders. I hailed the ANG guys, and they confirmed my suspicions. I asked if they knew any other place for us to get gas, and they told us the FBO was closed as well.

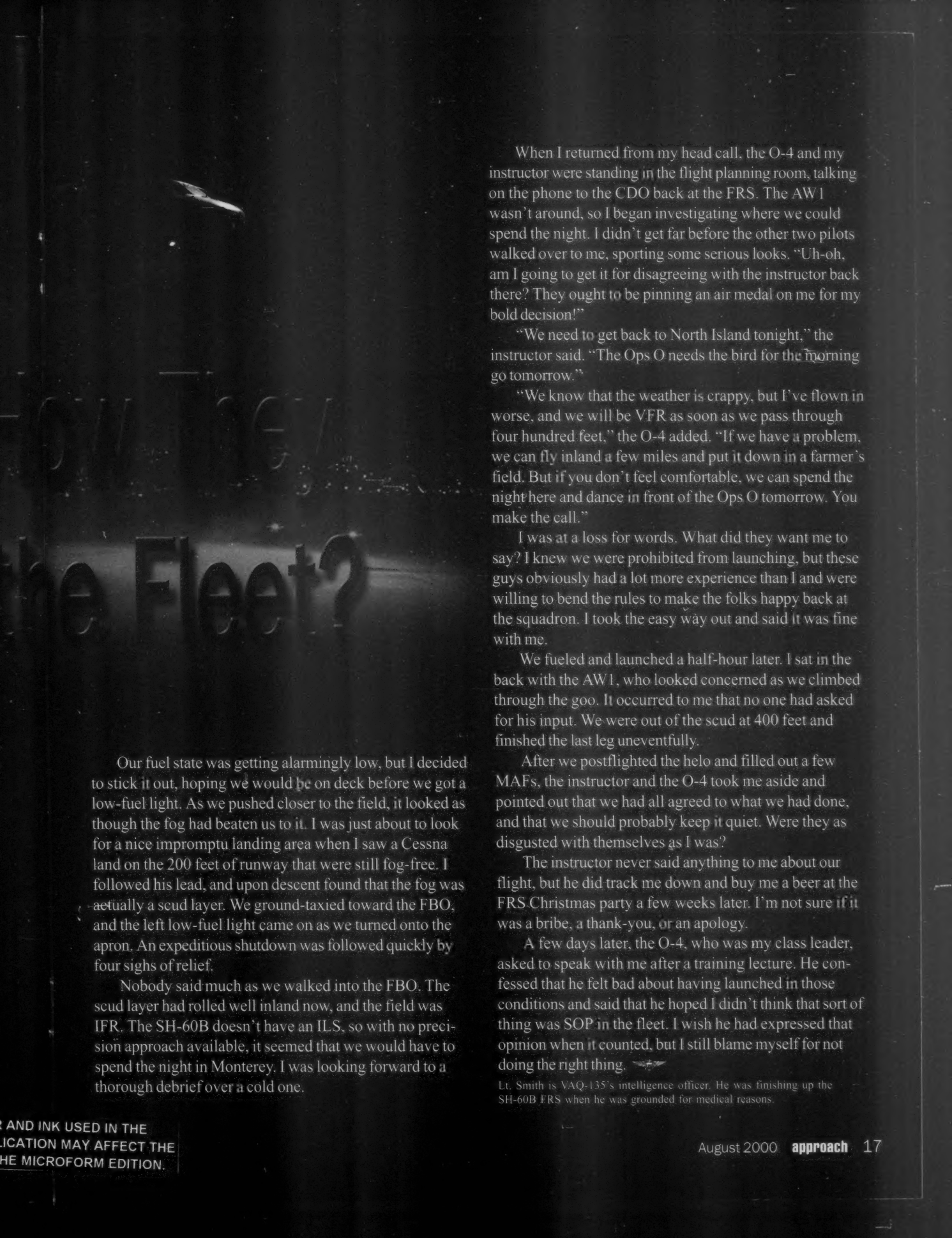
After a few minutes of confusion and finger-pointing, we decided to head over the mountains to Monterey. After a quick call to ATC, we received our new VFR clearance and turned west. Our fuel was going to be close, but the weather was great. We had to be back that night so the helo could fly tomorrow morning. No sweat!

As we eased over the mountains, the fuel state became our main concern. We were burning it more quickly than we had expected, and the cockpit grew quiet. The O-4 in the back kept his thoughts to himself, as did the AW1.

The familiar sweep of Monterey Bay came into view. A thick layer of fog was rolling in off the water, and the coastline had already vanished in many places. We had flown into Monterey on our trip north, and I had been flying on that leg as well. I remembered the airfield as being on the southeast side of the bay, and the fog was quickly socking in that area. To top it off, we couldn't pick up the field's NDB.

The instructor had been navigating over the mountains with Doppler and had the coordinates of the airport plugged into the system. On his tacnav display, the aircraft's position indicator was directly over the airfield icon, and he told me to look below us for the airfield. We were at 4,000 feet, and there was no fog below us. I could tell that we were at least 8 to 9 miles from where I knew the field was, yet the instructor insisted that we were over it and that I start a descent. We had lost radio contact with ATC because of the mountains, and we had no nav aids. Here was a situation we hadn't covered in aircrew training!

I pointed out that we hadn't had a good position for the tacnav system in well over an hour, and that Doppler was sure to drift. The instructor stuck to his guns about our current position. I was at the controls when I finally said to him, "You can jump out here if you want, but I'm going to go land at the airfield." He said nothing, and I pressed on to where I knew the field to be.



# the Fleet?

Our fuel state was getting alarmingly low, but I decided to stick it out, hoping we would be on deck before we got a low-fuel light. As we pushed closer to the field, it looked as though the fog had beaten us to it. I was just about to look for a nice impromptu landing area when I saw a Cessna land on the 200 feet of runway that were still fog-free. I followed his lead, and upon descent found that the fog was actually a scud layer. We ground-taxied toward the FBO, and the left low-fuel light came on as we turned onto the apron. An expeditious shutdown was followed quickly by four sighs of relief.

Nobody said much as we walked into the FBO. The scud layer had rolled well inland now, and the field was IFR. The SH-60B doesn't have an ILS, so with no precision approach available, it seemed that we would have to spend the night in Monterey. I was looking forward to a thorough debrief over a cold one.

When I returned from my head call, the O-4 and my instructor were standing in the flight planning room, talking on the phone to the CDO back at the FRS. The AW1 wasn't around, so I began investigating where we could spend the night. I didn't get far before the other two pilots walked over to me, sporting some serious looks. "Uh-oh, am I going to get it for disagreeing with the instructor back there? They ought to be pinning an air medal on me for my bold decision!"

"We need to get back to North Island tonight," the instructor said. "The Ops O needs the bird for the morning go tomorrow."

"We know that the weather is crappy, but I've flown in worse, and we will be VFR as soon as we pass through four hundred feet," the O-4 added. "If we have a problem, we can fly inland a few miles and put it down in a farmer's field. But if you don't feel comfortable, we can spend the night here and dance in front of the Ops O tomorrow. You make the call."

I was at a loss for words. What did they want me to say? I knew we were prohibited from launching, but these guys obviously had a lot more experience than I and were willing to bend the rules to make the folks happy back at the squadron. I took the easy way out and said it was fine with me.

We fueled and launched a half-hour later. I sat in the back with the AW1, who looked concerned as we climbed through the goo. It occurred to me that no one had asked for his input. We were out of the scud at 400 feet and finished the last leg uneventfully.

After we postflighted the helo and filled out a few MAFs, the instructor and the O-4 took me aside and pointed out that we had all agreed to what we had done, and that we should probably keep it quiet. Were they as disgusted with themselves as I was?

The instructor never said anything to me about our flight, but he did track me down and buy me a beer at the FRS Christmas party a few weeks later. I'm not sure if it was a bribe, a thank-you, or an apology.

A few days later, the O-4, who was my class leader, asked to speak with me after a training lecture. He confessed that he felt bad about having launched in those conditions and said that he hoped I didn't think that sort of thing was SOP in the fleet. I wish he had expressed that opinion when it counted, but I still blame myself for not doing the right thing.

Lt. Smith is VAQ-135's intelligence officer. He was finishing up the SH-60B FRS when he was grounded for medical reasons.

We were flying our FRS SH-60B back from Portland, Ore., to NAS North Island after a terrific weekend at an air show. The level of experience varied widely throughout the crew. I was the least experienced, a CAT I jaygee with only a few dozen hours in type. The other student was a CAT 1A lieutenant commander with tons of hours in H-2s, making his transition to the SH-60B. Our instructor was a cruise-experienced lieutenant with close to 1,000 hours in type. The aircrewman was a salty AW1 (is there any other kind?) with more hours in helos than I had in the Navy.

It was a fine, CAVU Sunday as we launched out of Portland. The leg down to Klamath Falls was notable only for the spectacular scenery. On landing, we had the AW1 take care of servicing the helo while the three officers went in to get weather and file. I was going to be flying this leg and was looking forward to a few hours of stick time. I got the weather while the instructor filed our next leg to Fresno for me. We manned up and launched.

When we got about 30 minutes out of Fresno, I flipped through the *IFR Supplement*, looking for the Fresno ANG base frequency. I discovered they didn't operate on Sundays. I asked the instructor if he was aware of this, and he shrugged his shoulders. I hailed the ANG guys, and they confirmed my suspicions. I asked if they knew any other place for us to get gas, and they told us the FBO was closed as well.

After a few minutes of confusion and finger-pointing, we decided to head over the mountains to Monterey. After a quick call to ATC, we received our new VFR clearance and turned west. Our fuel was going to be close, but the weather was great. We had to be back that night so the helo could fly tomorrow morning. No sweat!

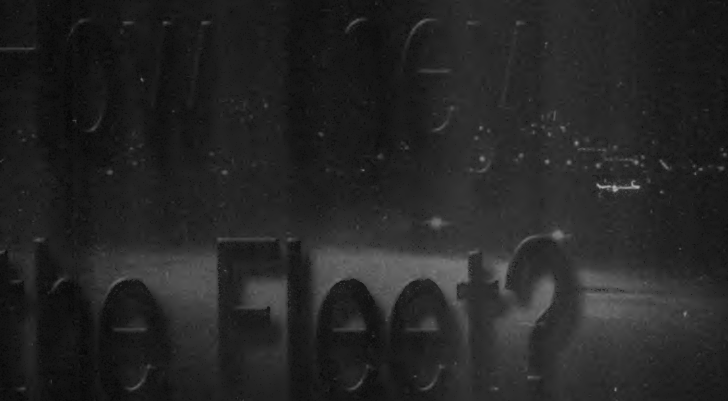
As we eased over the mountains, the fuel state became our main concern. We were burning it more quickly than we had expected, and the cockpit grew quiet. The O-4 in the back kept his thoughts to himself, as did the AW1.

The familiar sweep of Monterey Bay came into view. A thick layer of fog was rolling in off the water, and the coastline had already vanished in many places. We had flown into Monterey on our trip north, and I had been flying on that leg as well. I remembered the airfield as being on the southeast side of the bay, and the fog was quickly socking in that area. To top it off, we couldn't pick up the field's NDB.

The instructor had been navigating over the mountains with Doppler and had the coordinates of the airport plugged into the system. On his tacnav display, the aircraft's position indicator was directly over the airfield icon, and he told me to look below us for the airfield. We were at 4,000 feet, and there was no fog below us. I could tell that we were at least 8 to 9 miles from where I knew the field was, yet the instructor insisted that we were over it and that I start a descent. We had lost radio contact with ATC because of the mountains, and we had no nav aids. Here was a situation we hadn't covered in aircrew training!

I pointed out that we hadn't had a good position for the tacnav system in well over an hour, and that Doppler was sure to drift. The instructor stuck to his guns about our current position. I was at the controls when I finally said to him, "You can jump out here if you want, but I'm going to go land at the airfield." He said nothing, and I pressed on to where I knew the field to be.





Our fuel state was getting alarmingly low, but I decided to stick it out, hoping we would be on deck before we got a low-fuel light. As we pushed closer to the field, it looked as though the fog had beaten us to it. I was just about to look for a nice impromptu landing area when I saw a Cessna land on the 200 feet of runway that were still fog-free. I followed his lead, and upon descent found that the fog was actually a scud layer. We ground-taxied toward the FBO, and the left low-fuel light came on as we turned onto the apron. An expeditious shutdown was followed quickly by four sighs of relief.

Nobody said much as we walked into the FBO. The scud layer had rolled well inland now, and the field was IFR. The SH-60B doesn't have an ILS, so with no precision approach available, it seemed that we would have to spend the night in Monterey. I was looking forward to a thorough debrief over a cold one.

When I returned from my head call, the O-4 and my instructor were standing in the flight planning room, talking on the phone to the CDO back at the FRS. The AW1 wasn't around, so I began investigating where we could spend the night. I didn't get far before the other two pilots walked over to me, sporting some serious looks. "Uh-oh, am I going to get it for disagreeing with the instructor back there? They ought to be pinning an air medal on me for my bold decision!"

"We need to get back to North Island tonight," the instructor said. "The Ops O needs the bird for the morning go tomorrow."

"We know that the weather is crappy, but I've flown in worse, and we will be VFR as soon as we pass through four hundred feet," the O-4 added. "If we have a problem, we can fly inland a few miles and put it down in a farmer's field. But if you don't feel comfortable, we can spend the night here and dance in front of the Ops O tomorrow. You make the call."

I was at a loss for words. What did they want me to say? I knew we were prohibited from launching, but these guys obviously had a lot more experience than I and were willing to bend the rules to make the folks happy back at the squadron. I took the easy way out and said it was fine with me.

We fueled and launched a half-hour later. I sat in the back with the AW1, who looked concerned as we climbed through the goo. It occurred to me that no one had asked for his input. We were out of the scud at 400 feet and finished the last leg uneventfully.

After we postflighted the helo and filled out a few MAFs, the instructor and the O-4 took me aside and pointed out that we had all agreed to what we had done, and that we should probably keep it quiet. Were they as disgusted with themselves as I was?

The instructor never said anything to me about our flight, but he did track me down and buy me a beer at the FRS Christmas party a few weeks later. I'm not sure if it was a bribe, a thank-you, or an apology.

A few days later, the O-4, who was my class leader, asked to speak with me after a training lecture. He confessed that he felt bad about having launched in those conditions and said that he hoped I didn't think that sort of thing was SOP in the fleet. I wish he had expressed that opinion when it counted, but I still blame myself for not doing the right thing.

Lt. Smith is VAQ-135's intelligence officer. He was finishing up the SH-60B FRS when he was grounded for medical reasons.



# Dual-Piloted Partial-Panel

You'll always have at least one good set of instruments, right?

Wrong. I experienced "dual-piloted partial-panel" coming back to the ship, under a low ceiling, on a very dark night, and it was no fun.

photo by PH2(AW) Brian McFadden

by Ltjg. Paul Desaulniers

**I**n the East China Sea, we had received immediate tasking to launch on a surface surveillance and control (SSC) mission in our SH-60B. The ceiling was about 3,000 feet with unlimited visibility and forecast to stay that way. We flew 75 miles from home plate and quickly found our contact of interest. We orbited and were tasked to broaden our search for more contacts.

As the pilot at the controls (right seat) for most of the mission, I wasn't happy with my attitude indicator (AI) setting or pedal trim.

My AI did not compare favorably to that of the airborne tactical officer (ATO) or the horizon. I was constantly fighting an internal turn while my AI indicated straight and level, so I decided to make an in-flight AI adjustment. With the aircraft straight and level, nose on the horizon, and ball and turn needle centered, I adjusted it. This seemed to fix things for the moment. We pressed on with the mission but couldn't find other contacts of interest. As night fell and the mission wrapped up, I was still uncomfortable with the informa-

tion from my AI when compared to external cues. Also, the ceiling began to drop, requiring me to descend to stay below it.

I was just about to swap controls with the HAC in the left seat so that he could get some stick time, when an AFCS-degraded caution light on the caution-advisory panel grabbed our attention. We handled the emergency but couldn't reset the numerous associated failure cubes. We tried extensive troubleshooting with negative results and then determined that the ATO's AI had failed.

At 70 miles to the ship, I descended to 1,000 feet to avoid IMC, which barely allowed us to maintain data link with homeplate. The crewman donned his NVGs to see if they made it any easier to fly. When our crewman reported back that it was too dark to see the water, we were committed to returning to the ship partial-panel and unaided.

I hadn't practiced partial-panel since flight school, but took comfort in the fact that I had those hours of training to fall back on. My AI still didn't seem right, and with no outside reference, I had to concentrate on a turn needle-ball scan as the ceiling dropped farther. Because of weak pedal trim, the ball continued to wander off, forcing me to fight through some minor disorientation. The HAC backed up my scan and called out parameters, but the flying was still very challenging, to say the least.

Focused on my instruments, I descended to 500 feet at about 10 miles out. The ship's lights came into view, and the HAC relayed our relative position to the ship. I stuck with my instrument scan because it was too disorienting for me to look up and align myself with the ship's navigation lights. We lined up for an approach, then the ship decided to change course 180 degrees for better winds. After flying around for what seemed like forever, we received updated numbers and a green deck.

We set up for the approach using small increments on the turn needle. It was hard to relax and descend, because the ship was still too far away to go visual. The HAC coaxed me down, but as I looked out to pick up the deck environment, I felt high and fast. I remembered the eternal words of instructors


everywhere: "Wave off a bad approach early." I did.

As I pulled power and banked the aircraft, I was looking at a sea of black. Having transitioned from an instrument scan to a visual scan and back again, I looked down, desperately trying to regain my partial-panel scan. I remembered how difficult it was to fly partial-panel in flight school when the instructor failed the AI, rather than covering it, because the AI is the hub of a normal instrument scan. It was hard to drop the AI out of my scan and focus on partial-panel.

During the first few seconds after waveoff, regaining my air speed on a partial-panel scan provided yet another challenge. We were climbing through 300 feet when I instinctively nosed the aircraft over. I remember hearing the HAC say, "Power, power, altitude!" Up to that point, I had responded well to all corrections he had called out to me. However, at that moment, I failed to heed his sage advice. Fortunately, the HAC maintained his instrument scan during my transition to a visual scan. When I did not immediately respond to his challenge, he took the controls and we climbed out of danger. We leveled off on downwind, with me backing up the HAC's scan. After a few moments, the HAC transferred the controls back to me.

With 800 pounds of gas remaining, we had to make it happen. On this approach, we slowly but surely flew down the glide slope, transitioned to visual for a smooth landing, and shut down. Ahh!

At some point, I'm sure the HAC would have felt more comfortable taking the controls and flying partial-panel himself, but he didn't. He had confidence I'd bring the crew home safe. His actions showed me a lot about leadership in the cockpit and crew coordination. I also learned a lot about my abilities and limitations as a pilot, and how to be a good aircraft commander when the going gets tough.

Troubleshooters found a failed ATO AI, as well as a burned-out electronic amplifier that failed one of the compass-system flux valves. No wonder we had so much trouble with our instruments. 

Ltjg. Desaulniers flies with HSL-43's Det. 8.



by Lt. Ben Hewlett

**W**e were in the middle of our work-up schedule. With an at-sea period and Fallon under my belt, I was back doing FCLPs in the S-3, preparing for FleetEx. The typical, night-bounce period was over to El Centro and then back to North Island. As usual, when we got closer to deployment, the FCLP crunch began, and we started filling the jets with pilots, rather than the usual pilot-NFO combo.

After a quick hop to El Centro in the back of the Hoover, I got out and waited my turn in the LSO shack, watching my compatriots bounce around the pattern. Finally, it was my turn to hop in. I was supposed to "stuff," bounce and head back to North Island. The right-seater (a pilot) climbed out and waited for his ride in the LSO shack. The previous pilot hopped over into the right seat. I promptly filled the left seat after making sure the back seats were still secured.

The dominoes began to fall. Rushing through the takeoff checks didn't help, because tower told us to hold short—the pattern was full of Hoovers and Hornets. We decided to keep the APU running while we sat on the hot tarmac behind the hold-short line, promising ourselves that we wouldn't forget to shut it down before takeoff. When we got clearance for an immediate takeoff, we hurried on to the runway to take off in the small window the tower had cleared for us. We ran up the engines to MRT, rolled down the runway and lifted off. At rotation speed, the LSO reported that he had heard a loud thump as we passed the LSO shack. He thought it sounded like a blown tire. We turned downwind with the gear down and asked tower to elevate so we could "delta easy" and sort out the options.

The pilot in the right seat and I began to discuss some solutions to the problem. I hadn't noticed anything unusual about the aircraft as

# Suspicion Becomes Reality

we rolled down the runway. Should we set it down right there in El Centro or fly dirty back to North Island? We opted for the latter, told the LSO and tower, then headed west to North Island as fast as a dirty S-3 could fly.

Shortly after leaving El Centro's airspace, we realized that the APU was still running. Oops! We'd missed it and had taken off without completing the takeoff checks. The thump was probably the APU exhaust being ingested into the No. 1 engine. Without a visual confirmation, we decided to stick with the game plan and take an arrested landing back at North Island for a possible blown tire.

The flight back was very slow, and we had time to discuss what had happened. The pilot in the right seat broke out the PCL, and we went through the arrested-landing checklist, discussing contingencies. We requested a visual straight-in to runway 36 for an arrested landing and dropped our tailhook. Tower told

us we were cleared to land, and crash crews were standing by. As we turned final, I could see the blinking dots of the arresting gear on both sides of the runway. I aimed to set the jet down no more than 1,000 feet in front of the gear. Because of the short final, I found myself high and fast as I approached the runway. On touchdown, I went to idle, popped the boards, and waited for the hook to catch as the jet rolled toward the arresting gear.


And I waited.

And waited. Hook skip! The jet was rolling out normally. I knew instantly I didn't have a blown tire, so I applied the brakes to begin a normal landing rollout. I got an anti-skid failure, with an associated master-caution light flashing in my face. The brakes didn't respond at all. The pilot in the right seat confirmed that the anti-skid light was illuminated, and I reached down to switch the three-position brake switch out of "anti-skid"

continued on page 30



photo modified by Yvonne Dawson



# Silent Night

by Lt. Chris Petrock

**W**e brief NORDO procedures before every flight. Sure, many of us have had an amplifier give out mid-flight so that we were unable to transmit, but in this age of two radios and state-of-the-art equipment, what are the odds of going completely NORDO in the cockpit? Higher than I would have expected.

"Three Oh One's airborne," I called, as I launched into the darkness. Instead of the expected acknowledgment from departure, I got no response. I repeated my message. Again, dead silence. This time, however, I noticed the lack of a sidetone when I keyed the radio.

"Can anyone hear me?" I asked on our tactical frequency. "OK," I thought, "one of my comm cords must have come loose on the cat shot. I'll just wait until I'm safely away from the water and start checking my connections."

I switched my squawk to 7600 and donned my NVGs as I passed 3,000 feet. I continued checking in, on the off chance that I was actually transmitting. After leveling off overhead the ship at our pre-briefed rendezvous altitude, I began troubleshooting. Disconnecting and re-connecting all of my comm cords, turning both radios off and back on, and

initiating a BIT of the comm system, didn't fix the problem. After pushing and prying the hose connection between the seat pan and the seat pad with no success, I knew I was destined for a night of silence.

I patiently waited for my first playmate to arrive overhead. When he did, I feverishly flashed my external lights. He returned the flashes, joined to the inside of the turn, and secured his strobes, signaling that he had assumed the lead. "OK, now what?" I wondered. We continued to orbit until our two remaining wingmen joined. I could see on the NVGs that Dash 1 was the last plane to join. As I expected, he stayed on the inside of the turn while the plane that I had originally joined on slid to the outside. After Dash 3 and 4 departed, I assumed we would remain overhead until the end of the cycle or proceed to the tanker for our fragged gas.

Surprisingly, my lead started to descend. When I saw a quick squirt out of his fuel dumps, I figured that we must be headed for an immediate recovery. I began warily dumping gas, because I didn't want to dump all the way down to max trap right away in case of some unforeseen delay.



## **I feverishly flashed my external lights... "OK, now what?" I wondered.**

The descent was uncomfortably quiet, and I soon figured out why. Leveling off at 1,200 feet, I noticed that the altitude displayed in my HUD was flashing. Since I had no aural warnings in my headset, I had never heard my radar altimeter go off passing 5,000 feet (I had neglected to roll the bug down during the descent and did not notice the red light illuminate). When we were established on what I assumed to be a final approach course, I resumed dumping fuel down to max trap.

At 10 miles from the ship, my lead flashed his lights a couple times and we proceeded to drop the gear and go to half flaps (per squadron SOP). I selected the ILS and my lead took the ACLS needles. The ship came into view inside of six miles, and the tip over was uneventful. Just outside three-quarters of a mile, my lead added power and climbed while I was given a long shot of cut lights for my "roger ball." I transitioned to full flaps and flew my best approach, knowing that paddles would be unable to give me any line-up calls. In close, I was given a subsequent quick burst of cut lights for a "power" call and rolled out into the 2-wire, ending my ordeal.

I learned several lessons from this experience. First, regardless of what aircraft you're flying, never assume that a complete NORDO situation can't happen to you. (By the way, mine was caused by a loose, seat-pan connection.)

Second, especially at night when signals are difficult to pass, thoroughly brief all contingencies (shuffling flight members, passing the lead, tanking, and planned recovery time) so everyone's on the same sheet of music.

Next, I could have used my PRC-112 to pass information on guard. I didn't think about this tactic until we had started our descent to the ship, by which time I had my hands full just flying formation. I should have pulled the radio out overhead mother while waiting for someone to join. Also, as we all know, it takes a few seconds to transition from flying formation to flying the ball. On a clear night, with the ship in plain view, earlier is better than later when detaching a NORDO wingman.

Finally, never get so involved in the process that you break habit patterns (such as radar-altimeter discipline). NORDO is a legitimate emergency and should be treated as such. ✈

Lt. Petroek flies with VFA-136.

# My Day



Navy photograph by CNO Ed Bailey

by Lt. Andy Collier

**D**uring my first at-sea period (a good-deal, 56-day, WestPac “deployment”), I took turns standing duty as the air-wing safety officer. This watch rotates among the squadron safety officers; I had it every eighth day. Every time it was my turn, there were no flight ops, because we were either in port, or it was a rare no-fly day.

The next time it was my turn, I got up and donned a flight-deck jersey instead of my flight suit. I headed to the ready room to get a cup of coffee and peruse the message board while the first briefs of the day were going on. I also glanced at the air plan to note the timing of the FOD walkdowns. I saw that flight ops were scheduled to continue until long past midnight. I noted with satisfaction that my squadron was also FOD-god for the day, which meant we were in charge of organizing the FOD walkdowns for the air wing. That meant there would be lots of familiar faces at the walkdowns.

Crews walked for the first event. I grabbed my float coat and cranial and headed up on the roof to begin my day as safety observer. I wondered whether I was going to contribute to safety or just be one more person in the way on the deck. After all, most of these folks were up on deck long before my first brief and were still there long after I finished mid-rats, day in and day out, in all kinds of weather. What could I possibly tell them?

I started by checking in with the handler and flight-deck control. The handler briefly described the day’s operations and emphasized the importance of keeping unnecessary people off the deck. He must have been reading my mind. Next, I did the J.O. workout and climbed all those ladders up to the 09 level to drop in on the air boss in pri-fly to see if he had any passdown or words of wisdom for me. The boss reminded me to keep my eyes open and my head on a swivel.

So out I went into that most dangerous and unnatural environment: the flight deck during

cyclic ops. In a float-coat and cranial. No helmet, SV-2 and nav bag. No strapping in. Just me with a big deer-in-the-headlights look, playing on the freeway during rush hour—and rush hour happened here every 1+15.

It was a long, rainy day. We were in the Gulf of Thailand on a joint exercise, so it would have been hot, even without all the jet engines turning. When it wasn't raining, the humidity was worse than the hottest summer day in Pensacola. By the time the last fixed-wing recovery was complete at 0130, I'd been pounding the steel since 0900, and my feet hurt worse than I thought possible.

I'd learned a few things, so I sat in my stateroom late at night to record them.

First, empty your pockets. Of everything, not just the obvious spare change and keys, every time you go up on the deck. Leave it in your stateroom, your mailbox, your ready room chair, the SDO desk, anywhere but on the flight deck. Things fall out of pockets, always have and always will.

Next, always, always keep your head on a swivel. Make sure the maintainers and shooters on the deck do the same thing. After being on the deck during one or two fly days, it becomes too easy to get used to the tempo and relax. Those guys in float coats up there every day get tired and distracted, too.

Always take the route to the jet that minimizes the amount of flight deck you have to cross. And if you ever get to be air-wing safety duty officer, make sure you use a cranial with a head set and a mouse from either ship's safety or UHF repair. Having a mouse on the flight deck is like turning on the lights in a dark room. The added situational awareness helped me be part of the safety solution, rather than one more clueless observer getting in the way and being part of the problem.


FOD walkdowns are extremely important. Not only do you prevent losing engines and get a breath of fresh air and some sunshine, you can let the maintainers in your squadron see you up there. You can inspire them by showing them you care about the airplanes and FOD. They notice if you are there. And they notice if you aren't there. It may not seem like much to you, but they notice.

Always wear your personal protective equipment. Always wear double hearing protection. Always make sure that your harness is zipped and cinched, your SV-2 is zipped and attached, and that you wear your visor down (preferably the sun visor

during the day and the clear visor at night, not the other way around). Notice if your plane captain, troubleshooters and maintainers are wearing their PPE correctly.

During the rain, the line guys had their rain gear on. I noticed one PC who appeared to be wearing his float coat under his rain coat. That didn't seem to be the optimal way to wear a float coat, and I pointed that out to the young PC. When I grabbed his shoulder to get his attention over the noise of the turning jet, I could tell that he had forgotten his float coat entirely. Looking embarrassed, he scrambled below to find it.

Never think, "They can't possibly be that dumb" when watching an unsafe situation develop. Jump in and stop it when you see the links of the chain building. I watched a Hawkeye taxiing off elevator 4 and forward over the arresting wire on its way to cat 3. The nose-wheel straddled the No. 3 arresting wire and went out of detent. As the Hawkeye added power to get over the wire, the nosewheel ended up just sliding down the wire. So the yellowshirt called a couple of blueshirts to put a tow bar on the nosewheel and use it as a lever to rotate it back into the nosewheel steering detent. So what did the blueshirts do? They attached the towbar to the aft part of the nosewheel, requiring them to lever the tow bar toward the prop arc to get the nosewheel back into detent. When I saw the squadron flight-deck chief holding onto the float coats of the blueshirts to keep them from getting sucked into the prop arc, I couldn't stand it anymore and intervened. They were just too close to slicing and dicing a couple of blueshirts. I don't want to call anyone "dumb," but after 10 or 12 hours on deck in the blistering heat with the air boss, the bosun and the chief yelling at you, anyone can do things that seem stupid. The blueshirts reattached the tow bar to the forward part of the nose gear, wedged it back into detent, and the aircraft launched without further incident.

Mostly I tried to stay out of the way. It's a fast-paced world on the flight deck, one that we aviators aren't used to unless we are strapped in and taxiing toward the cat. Not getting used to it is good, because it keeps us from being too comfortable up there. 

Lt. Collier flies with VAQ-136





# Roll

## Out the Barrel, We'll Have a Barrel of ...

by Lt. Mark Lucas

# Yikes!

K. Hagenlip  
composition by John W. Williams

**I**t was a beautiful day in southern Turkey. The flight schedule offered a training flight in which we were to do basic formation work, section approaches over the water, cruise maneuvering and a little tac form. After about a month with little flying at Whidbey Island, we deployed to Incirlik. We were just getting back in the saddle with our first flight in the local area. We were Dash 2 of a section of Prowlers, and, with the exception of one crew member, three of us had flown extensively as a crew in support of Operation Allied Force two months prior. The brief was according to NATOPS, but it didn't cover ACM training rules. This omission would haunt us.

We did our crew brief, emphasizing operational risk management (ORM) because we hadn't yet flown in the area, and one of our crew members (ECMO 1) was new. We knew we had to walk before we ran; we needed to familiarize ourselves with local area procedures and gradually get aggressive.

The flight to the practice area was uneventful, and we knocked out the practice approaches at altitude (the hard deck was at 5,000 feet). We began our cruise maneuvering, then things started to go awry.

We were just getting comfortable with the G's through a few warm-up maneuvers. Our pilot was very smooth on the controls, and we were having fun flying around in the clear weather (a pleasure after months of clag at Whidbey). The lead pilot began a barrel roll at approximately 10,000 feet and lost sight of us off his right side. Distracted by trying to regain sight of us, he delayed his pull once "over the top" and floated, inverted, to 13,000 feet and 270 KIAS. The delay at the top of the maneuver resulted in a delayed application of roll. He finally ended up nose low and losing altitude fast. Being a good wingman, our pilot followed. When I looked at our attitude passing 5,000 feet, we were 60 degrees nose low, 45 degrees angle of bank, and 500 KIAS. "Watch your nose," I piped up on the ICS.


Aggressively pulling for the recovery, we bottomed out at approximately 1,800 feet (that's 3,200 feet below the deck, for the English majors), with our radalt blaring. After wiping the sweat off our brows, we sheepishly completed the rest of our maneuvers.

Our extensive debrief produced several lessons. First, conduct the right briefs before walking to the jet. Even though we weren't doing any type of ACM, we should have briefed the training rules, which emphasize knock-it-off calls, hard and soft decks, and weather criteria for maneuvering flights.


Second, if the situation starts to degenerate, anyone in the flight can call, "Knock it off" on the ICS or UHF. My warning about attitude was the only comm during this fiasco. Nobody said anything over the UHF. Although everyone was well aware of the danger (as evidenced by the comments during the debrief), no one was aggressive enough to speak up.

Third, use ORM. How frequent and how hard were your recent sorties? To a fighter guy, basic section work is second nature. In Prowlers, with some squadrons having only one flyable jet for long periods, formation basics can become fuzzy. Is your cockpit ready for a challenging, section-maneuvering mission? On this day, it would have been wiser to crawl (and work as a single through basic aerobatic maneuvers) before walking or running.

Make sure you brief dive recovery, 10-degree and 50-percent rules, and the ACM training rules before low-level maneuvers (even though the soft deck is supposed to keep you away from the low-level environment).

Finally, exceeding your personal comfort level (and that of the crew) should be enough to warrant a knock-it-off call. Don't let safety take a backseat, even if you're in the backseat. 

Lt. Lucas flies with VAQ-134



# Ok, That's Enough ACM—Let's Try Some Departures

composition by John W. Williams

by Lt. Chris Baumstark

It was the best of days,  
it was the worst of days.

**I**t started with typical Oceana summer weather, namely, beautiful. We were scheduled for the day's first go: 1 v 1 ACM and a check ride for the pilot. The first part went smoothly, and we prepared for the meat of the latter syllabus, the butterfly setup. The fight went well for the first couple turns with my pilot, who did his best against the experienced SWATSLANT instructor pilot. One BFM error later and we found ourselves defensive as we fought down to the 5,000-foot hard deck. After a couple of turns on the deck, out of knots and ideas, and getting more defensive by the minute, I heard, "Knock it off" from the front cockpit.

Then began the worst of days. I wrenched my now sore neck forward to recage my mental gyro before taking notes. Then I felt the aircraft flip over and into an 85-degree, nose-low dive. A quick scan of the altimeter showed us at 3,000 feet. NATOPS says that if you're out of control below 10,000 feet, you should eject. Almost immediately, I felt the pilot roll the aircraft to the horizon and pull. We were no longer out of control, so I decided to give him a few seconds to recover.

Since the altimeter indicated our time-to-live, I began a steady cadence of altitude calls. Passing 2,500 feet, I asked the pilot if he had control of the aircraft. No response; all his attention was focused on recovery. The aircraft's nose tracked toward the horizon, then again sliced to the left. Although not nearly as violent as the first rolloff, it was still uncomfortable. Just as I reached for the handle, I felt the nose again begin tracking back up towards



the horizon. We were now passing 2,000 feet. Again, I asked the pilot if he had control of the aircraft, this time in a more forceful tone. No response.

With the nose 25 degrees from the horizon, the nose sliced left yet again. By now, I'd seen enough. We had now departed three times below 5,000 feet and the pilot was not talking to me. I reached down for the lower ejection handle with both hands, sat back into the ejection position, and prepared for the Martin-Baker express.

One last time, in an extremely urgent tone, I asked the pilot to tell me if he had control of the aircraft. Just before I would have pulled the handle (passing 1,300 feet), the pilot finally responded that he had control of the jet. I watched the altimeter bottom out at 600 feet AGL and then begin to climb. The harrowing trip from 5,000 feet to 600 feet took less than 11 seconds. It wasn't until we were safely climbing past 10,000 feet that I was able to pry my fingers from the ejection handle.

I later found out that the pilot knocked off the engagement after a caution/advisory light illuminated—a prudent decision. When he tried to roll upright to investigate the problem, he did not release backstick, and instead, induced a lateral-stick departure, which sent us off to the races. Pulling past the stall-limit angle-of-attack during the recovery caused the subsequent departures.

Some may second-guess my decision to remain with the aircraft, contrary to NATOPS. We certainly would not have been wrong to pull the handle. However, based on our rate of descent, airspeed and dive angle, I concluded the pilot would still be able to recover, and we had remained within the ejection envelope. Knowing my aircraft's recovery characteristics and ejection envelope was vital in deciding not to eject.

I don't want to find out what I'd do the next time.

LT. Baumstark flies with VF-11.

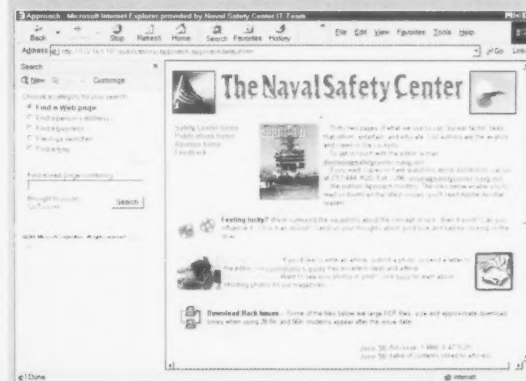


## Thanks for help with this issue

Ltjg. Angelene Lomax,  
public affairs officer, HSL-43  
LCdr. Todd Abler, VAQ-131  
Pat Nichols and Ron Westlake,  
public affairs office, NAS Pensacola  
PHC Mahlon Miller, Fleet Imaging  
Command, Pacific

## On Our Web Site

- A year's worth of back issues
- "Brownshoes in Action" archive
- Gouge on submitting articles and photos
- Posters to download or order by mail



and into "normal brake." However, I inadvertently pushed the switch all the way into the emergency-brake position. The brake-selector valve pulsed as it switched to emergency brakes, and I immediately heard a loud thump on the right side of the jet. The aircraft began to pull right. Now I did have a blown tire, and as the aircraft slowed through 100 knots, the pull to the right required almost a full boot of left rudder to keep the aircraft on the runway. With less and less wind over the rudder, the aircraft neared the right edge of the runway, and I could see the long-field, arresting-gear battery approaching the nose of the aircraft.

The thought of exiting the aircraft through the roof crossed my mind. With full, left-rudder, I couldn't engage nosewheel steering. Faced with hitting the arresting battery, I gave the aircraft one more hard kick of the left-rudder pedal. The aircraft turned hard to the left. The right wingtip narrowly missed the runway and the long-field arresting wire. The bird crossed back over to the left side of the runway at about a 30-degree angle, and the hook engaged the long field gear, pulling us to a stop after we left the runway and came to rest in the dirt.

The next few hours were filled with blood tests and personal histories. The resilient S-3 engines survived the ordeal without FOD damage, and the overall damage to the aircraft fell below the Class-Charlie cutoff. The realization of how close we'd come to wrecking the jet and killing ourselves set in during the next few days.


After recounting the story to the ready room, I took several points away from the ordeal. When you have a non-standard crew—especially when a pilot is in the seat where an NFO usually sits—the risks have increased, and you must be on your best game.

Live and die by your checklists. Some of them, done incorrectly, can kill you, and the takeoff checklist is one of them.

When other aircraft are nearby and when time permits, always get a visual inspection from another aircraft. Doing that would have prevented me from losing all that blood at the hands of the flight doc late one night. It also would have kept me from getting behind on my FCLP requirements.

Know your aircraft's history. This aircraft had had several anti-skid failures in the weeks before my flight.

Finally, once you've made a decision, follow through with it. Even though we had decided that the aircraft probably didn't have a blown tire, we elected to leave the gear down and take an arrested landing anyway because of the uncertainty. We completed the arrested-landing checklist, but we didn't execute the "landing with a main wheel blown" emergency procedure. The first step of this procedure is "brake selector switch — anti-skid off."

A lot of things could have prevented this wild ride. They boil down to good crew coordination and good decisions in the cockpit. I'll fly smarter tomorrow. 

Lt. Hewlett is an LSO with VS-33

How to order sets of two laminated, wallet-sized cards that introduce Operational Risk Management.

**Contact:**

Defense Automated Printing Service  
1641 Morris Street, Bldg. KBB  
Norfolk Naval Station  
Norfolk VA 23511-4399

POC is Mike Benton,  
(757) 444-7724, Ext. 15  
(DSN 564), e-mail  
mbenton@daps.dla.mil

**Operational Risk Management**

**5-Step Process**

- Identify hazards
- Assess hazards
- Make risk decisions
- Implement controls
- Supervise (watch for changes)

**Risk Matrix**

		Probability			
		A	B	C	D
Severity	I	1	1	2	3
	II	1	2	3	4
	III	2	3	4	5
	IV	3	4	5	6

**Risk Assessment Code**  
 1 = Critical  
 2 = Serious  
 3 = Moderate  
 4 = Minor  
 5 = Negligible

The back of the card on the left lists the four principles of ORM. The back of the card on the right defines "probability" and "severity."

# Getting Into the Zone



photo by Peter Mensky

**Ltjg. Dwight Clemons**


**N**aval aviators have two types of jobs: the flying job, which we all enjoy, and the ever-present ground job, which seems to demand most of our attention. Too often, questions about paperwork interrupt flight briefs. After the brief, we dash to complete one

more task before strapping on the jet. We recently analyzed this problem and developed a simple way to stay focused before, during and after the pre-flight briefs.

At least one half-hour before brief time, aircrew shed their patches, just like they would before a combat mission. When the patches come off, every member of the squadron knows the aircrew are in their aviation zone; nobody should bother them about paperwork or hit them with a last-minute assignment. It is all about flying at that point.

We've found it to be an effective way to keep our aircrew focused on being combat aviators. It's helped us compartmentalize, and the whole squadron has ownership of this concept.

We also have placed more focus on the crew concept of briefing. From O-5 to O-2, every member of the crew takes some responsibility in preparing for the flight. This lets the commanders and lieutenant commanders bring more corporate knowledge to every brief. They have been able to spend more time teaching and sharing ideas about tactics, things you can't get from a book. With more people preparing for the flight, it takes less

time for the administrative portion to be completed. This allows more time for the crew to spend on designing a better training mission with better practice scenarios. *[For more on preflight compartmentalization, see "Is the Skipper in His Box, Yet?" in the May issue.—Ed.]* 

Ltjg. Clemons flies with VAQ-136.



Sent: Tuesday, June 20, 2000 4:42 PM  
Subject: Looking Good

I ran across your web site a while back and wanted to compliment you on the growth of *Approach*. I am a former *Approach* editor and managing editor (circa April 1968-June 1969) as well as the editor of the first *Fathom* issue. My staff and I introduced the first-ever full-color covers to *Approach*, but not without justification that would have moved most mountains. Over the years I have heard many kind remarks about *Approach* from aviators of all the U.S. military services and presume they still reach your desk from time to time. Continuing good luck to you and your staff.

Cdr. Charles F. Clark, Jr., USN (Ret.)  
P.O. Box 66, Hiram, ME 04041

*Thanks for the kind words. The March 1969 wrap-around cover was a painting of an RA-5C "off on another recon mission." — Ed.*

## approach

MARCH 1969 - THE NAVAL AVIATION SAFETY REVIEW



# On Cat 1

Coming Attractions for September

Overdoing It

Ooh, Look, a Waterspout!

15,000 Feet and Feeling No Pain





## Class A Mishaps

AIRCRAFT	SQUADRON	DATE	No.
CH-46E	HMM-2650	2/09/00	0
Sea Knight had an in-flight fire in a DLQ pattern and recovered aboard ship. Downgraded to Class B.			
F-14A	VF-101	06/18/00	2
Aircraft crashed into the ground during a flight demonstration.			
	HMM-464	06/21/00	1
Landing gear collapsed on an airframe mech who was working on the port MLG.			
AV-8B	VMA-211	06/21/00	0
The pilot ejected because of engine problems and the aircraft crashed into the ground.			
F-14A	VF-211	06/23/00	0
The aircraft crashed into the sea after cat launch.			
FA-18D	VMFA(AW)-533	07/07/00	0
The aircraft departed controlled flight and crashed into water.			
T-38A	NAVTESTPILOTSCH	07/11/00	2
The aircraft crashed on the approach end of the runway.			
EA-6B	VAQ-129	07/12/00	1
The driver was fatally injured when a tow tractor ran into a parked aircraft.			
SH-60F	HS-5	07/14/00	0
FA-18C	VFA-131		
An unmanned Hornet rolled across the flight deck, collided with and crushed the aft pylon of a helo.			
F-14B	VF-11	07/26/00	0
An aircraft with hydraulic failure crashed en route to a divert field.			

## Class A Flight-Mishap Rate

FY 00 thru 7/31/00

FY 99 thru 7/31/00

	No.	RATE	No.	RATE
COMMAND				
NAVY/MARINE	24	1.93	19	1.50
ALL NAVY	16	1.68	6	0.62
ALL MARINE	8	2.75	13	4.29
NAVAIRLANT	7	2.89	1	0.39
NAVAIRPAC	1	0.39	3	1.11
MARFORLANT	2	2.04	2	1.83
MARFORPAC	5	3.60	11	7.92
CNATRA	3	0.93	2	0.65
NAVAIRRES	2	2.10	0	0.00
4TH MAW	0	0.00	11	7.92
NAVAIRSYSCOM	2	8.17	0	0.00
NON-TYCOM	1	14.57	0	0.00

## Milestones

VPU-2	06/30/00	2,100	18
VFA-147	07/12/00	38,000	9
VFA-146	07/17/00	62,000	15
VFA-113	05/26/00	112,600	26
VS-31	07/15/00	119,600	30
VAQ-132	07/05/00	50,000	30
HS-10	06/15/00	35,000	7
VP-1	06/15/00	107,000	17
VF-154	06/15/00	2,600	1
VQ-1	06/27/00	79,000	13



**It Took Years**

**to Train You...**

**a Second to Lose...**

[www.safetycenter.navy.mil](http://www.safetycenter.navy.mil)



